

New Equipment for Improvement of Stainless Steel Casting Quality*



Synopsis:

Installation of new equipment to No. 1 continuous caster of Chiba Works by which stainless steels are mainly cast.

Table 1 Steel grades cast at Chiba No. 1 continuous

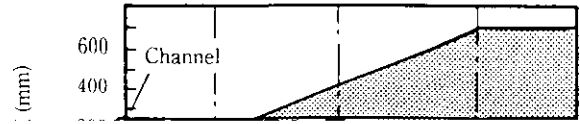
Iron yoke

Molten steel

Steel grades cast at Chiba No. 1 continuous	Iron yoke	Molten steel
XXXX		
XXXX		
XXXX		
XXXX		
XXXX		
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XXXX		
XXXX		
XXXX		
XXXX		
XXXX		
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Table 2 Casting conditions for experiments

Slab size	No. 1 CC
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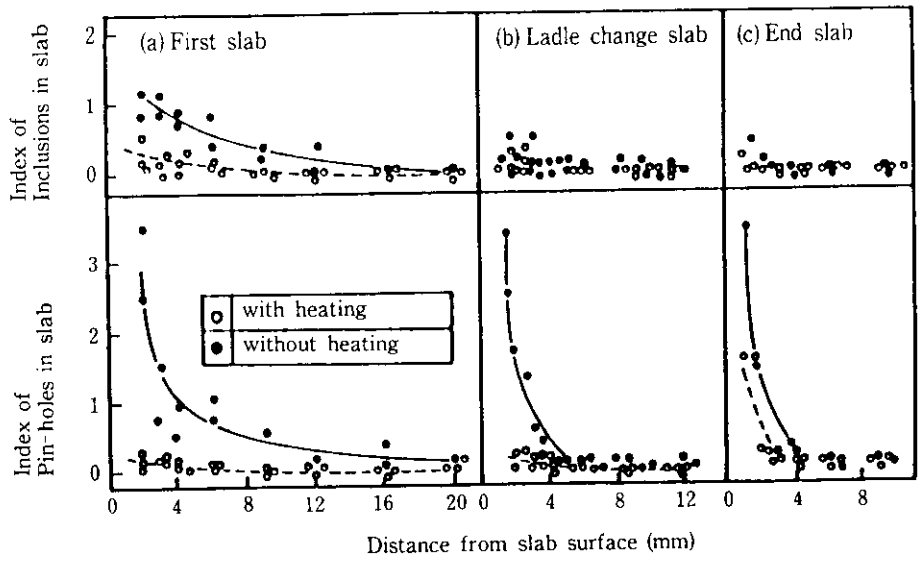
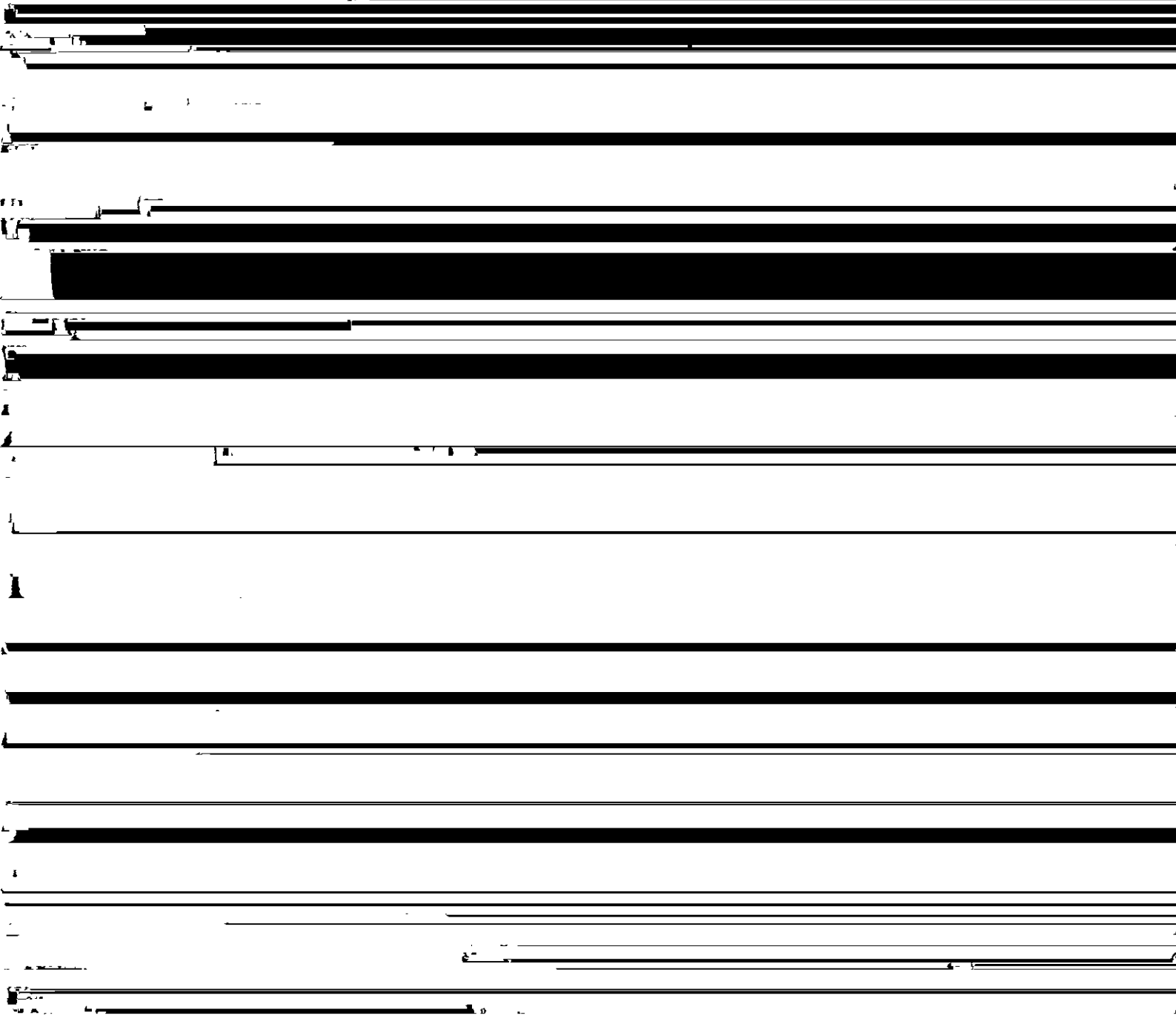


Fig. 4 Decrease of inclusions and pin-holes in SUS 304 slab by tundish heater

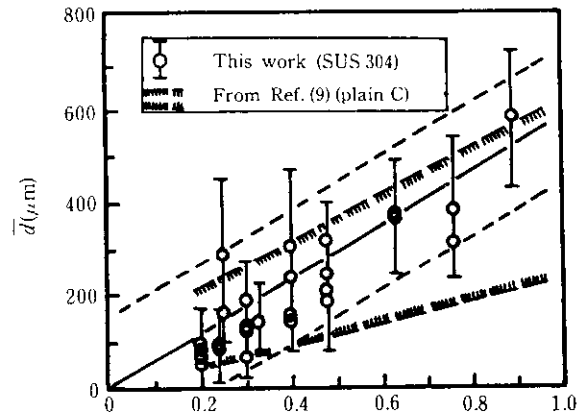
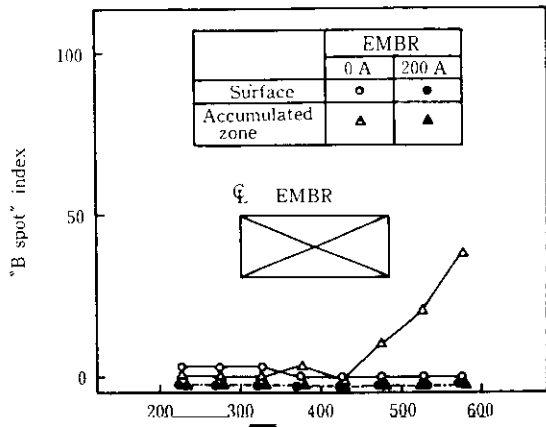
the temperature of molten steel to be processed by con- stages of casting. The influence of tundish heating on



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Direct current is applied to the four coils installed on the side of the wide face of the mold to generate direct cur-



Distance from center of slab width (mm)

Fig. 9 Effect of mold oscillation on the mark depth of slabs

2.3.1 Modification of mold oscillation equipment

As the mechanism for mold oscillation at the No. 1

The application of EMBR markedly reduces this

ten slag which pushes forward frozen shell toward the molten steel. This molten slag is forced to flow into the

$u = 0.8 \text{ m/min}$	$s = 2.6 \text{ mm}$	$f = 250 \text{ cpm}$
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[REDACTED]

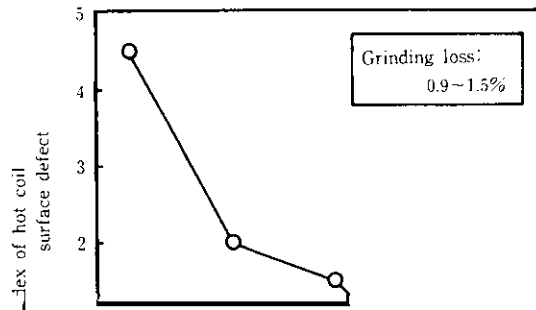
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Table 3 Specifications of conditioning machines for specialty steel

grinding pressure and surface roughness is shown in Fig. 15. The incorporation of the parameter of grinding



tundish heating process, by improving oscillation conditions, and by implementing shot blasting, but also to take countermeasures to stabilize slab quality by consistently controlling heating temperature, oxygen concentration in the atmosphere, and holding time in the hot rolling reheating furnace.

4 Conclusions

The development of new continuous casting techni

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15) M. Hada, T. Watanabe, T. Yamamoto, T. Matsumoto and

T. Ueda, *Tetsu-to-Hagané* 69(1983)13 2033